

Applicant : Mark B. Rosenbluth et al.
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REMARKS

Applicant acknowledges with thanks the examiner's allowance of claims 9-10, and the examiner's indication that claim 8 would be allowable.

Applicant amended the detailed description to properly refer to the queue manager programming device using reference number 27.

With reference to the examiner's request in paragraph 5(b) of the April 20, 2005, Office Action, although applicant has included in his January 13, 2005, Reply to Office Action, an amendment that adds a description for FIG. 5A, applicant again presents for the examiner's convenience that amendment.

Applicant has amended claim 4 to include a feature similar to the feature recited in allowable claim 8, namely, that at least some of the count fields for queue descriptors are stored in a queue array cache, thus making claim 4 allowable. Claim 8 was cancelled without prejudice.

The examiner has rejected claims 1-3, at paragraphs 7-9 of the Office Action, under 35 U.S.C. §112, first paragraph, on the ground that the element "information carrier" does not appear in the original disclosure. The examiner has also rejected claim 1, at paragraphs 12(b) and (c) of the Office Action, under 35 U.S.C. §112, second paragraph, on the basis of applicant's use of the wording "being operable" and "tangibly embodied in an information carrier." The examiner has further rejected claims 1, at paragraph 15(a) of the Office Action, under 35 U.S.C. §101 on the basis that the examiner considered that the computer program product is not stored on a computer readable medium.

Applicant has amended claim 1 to remove the wording "tangibly embodied in an information carrier" and to further indicate that the computer program product resides on a computer readable medium, thereby overcoming the above-mentioned rejections. This amendment also overcomes the examiner's objection, indicated in paragraph 5(c) of the Office Action, that the wording "information carrier" does not have an antecedent basis in the specification.

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The examiner has also rejected claims 1-3 and 11-12, at paragraph 10, under 35 U.S.C. §112, first paragraph, as having undue breadth. Particularly, the examiner relied on MPEP 2164.08(a) dealing with the undue breadth of single means claims to reject by analogy applicant's claims. Applicant respectfully disagrees with the examiner's position for the following reasons.

As the examiner correctly noted, applicant's claims 1 and 11 are not "means-plus-function" claims, and thus the guidelines provided in MPEP 2164.08(a) do not apply to applicant's claims. Rather, applicant contends that issues of undue breadth vis-à-vis applicant's claims are to be dealt with under the guidelines provided by MPEP 2173.04:

2173.04 Breadth Is Not Indefiniteness

Breadth of a claim is not to be equated with indefiniteness. In re Miller, 441 F.2d 689, 169 USPQ 597 (CCPA 1971). If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. 112, second paragraph.

Undue breadth of the claim may be addressed under different statutory provisions, depending on the reasons for concluding that the claim is too broad. If the claim is too broad because it does not set forth that which applicants regard as their invention as evidenced by statements outside of the application as filed, a rejection under 35 U.S.C. 112, second paragraph, would be appropriate. If the claim is too broad because it is not supported by the original description or by an enabling disclosure, a rejection under 35 U.S.C. 112, first paragraph, would be appropriate. If the claim is too broad because it reads on the prior art, a rejection under either 35 U.S.C. 102 or 103 would be appropriate. (emphasis added)

Thus, a claim may be considered to have undue breadth if: 1) it does not set forth that which applicants regard as their invention as evidenced by statements outside the application, 2) the claim is not supported by the original description or by an enabling disclosure, or 3) the claim reads on the prior art.

The subject matter disclosed in amended claim 1, namely, the execution of a write queue descriptor count instruction that causes a processor to write a single word containing a queue count for each of a plurality of queue entries in a queue array cache, is amply supported by the application as filed. Support for the above feature may be found, for example, at page 3, line 13, to page 4, line 5 of the application. Additionally, the examiner did not raise prior art rejections

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vis-à-vis claim 1, nor did the examiner allege that the applicant has made statements outside the application that may indicate that the applicant regards its invention to be something other than what is being claimed. Accordingly, applicant considers independent claim 1 and its dependent claims to conform to the requirements of 35 U.S.C. §112, first paragraph, and thus does not consider the claim to have undue breadth. For similar reasons, applicant considers independent claim 11 and its dependent claim 12 to also conform to the requirements of 35 U.S.C. §112, first paragraph, and does not consider the claims to have undue breadth.

The examiner also rejected claims 1 and 11, at paragraph 12(a), under 35 U.S.C. §112, second paragraph, as being indefinite because, according to the examiner, the claims contain no apparent transitional term or phrase, which makes the scope of coverage of these claims uncertain.

The applicant notes that rule 37 CFR §1.75, governing the form of claims, does not require the use of transitional phrases. Indeed, the examiner did not identify any statutory provision or guideline reference that calls for the inclusion of a transitional phrase.

Moreover, the preamble of applicant's amended claim 1 now reads: "[a] computer program product for high speed queuing, the computer program product residing on a computer readable medium and comprising instructions that when executed cause a data processing apparatus to:." This preamble conforms to the conventional form widely used to recite computer program product claims. Such claims are regularly used and appear in numerous issued patents including, for example, recently issued U.S. Patent Nos. 6,931,639, and 6,931,110. Applicant thus considers independent claim 1 to conform to the requirements of 35 U.S.C. §112, second paragraph, as being definite.

Applicant amended independent claim 11 to correct an antecedent problem in the preamble. The preamble of applicant's independent claim 11 now recites: "A computer program product residing on a computer readable medium having instructions stored thereon which, when executed by a processor, cause the processor to:...". For similar reasons as those provided with respect to independent claim 1, applicant considers independent claim 11 to conform to the requirements of 35 U.S.C. §112, second paragraph, as being definite.

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The examiner also rejected claims 1-3 and 11-14, at paragraph 15(b) and (c) under 35 U.S.C. §101, as lacking patentable utility. For example, with respect to claim 1, the examiner has argued that the mere writing by a processor of a single word containing a queue count for each of a plurality of queue entries in a queue array cache is by itself nothing more than the manipulation of data with no useful result or practical benefit being claimed or asserted.

Applicant respectfully disagrees. Applicant's claim 1 is not merely a manipulation of data. Rather, applicant's claim 1 describes that by executing a write queue descriptor count instruction, a processor writes a single word containing a queue count for each of a plurality of queue entries in a queue array cache. Execution of the write queue descriptor count instruction enables transfer of queue counts to a queue array cache, which provides improved and expeditious processing of output queues that handle high bandwidth data rates. Clearly applicant's claim 1 has a real and important patentable utility, and is not a mere manipulation of data, as contended by the examiner. Applicant's claim 1 and its dependent claims are thus patentable under 35 U.S.C. §101.

Applicant's independent claim 11 recites a computer program product residing on a computer readable medium. Claim 11 thus claims a novel article of manufacture, namely a computer readable medium having instructions stored thereon which, when executed by the processor, cause the processor to maintain a count field for queue descriptors of active output queues current in a memory. Thus, for analogous reasons as those given with respect to independent claim 1, claim 11 and its dependent claims are patentable under 35 U.S.C. §101.

The examiner rejected, at paragraph 16-18 of the Office Action, claims 4-7 under 35 U.S.C. §102(e) as being anticipated by U.S Patent Publication No. 2003/0110166 to Wolrich et al.

Amended independent claim 4 discloses maintaining a count field for queue descriptors "wherein at least some of the count fields for queue descriptors are stored in a queue array cache." This feature is similar to the feature recited in old claim 8, which the examiner had indicated contained allowable subject matter. Accordingly, independent claim 4 is now

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allowable over the Wolrich reference. Indeed, Wolrich does not disclose or suggest storing count fields for queue descriptors on any type of cache.

Claim 5-7, which depend from independent claim 4, are also patentable for at least the same reasons that claim 4 is patentable.

It is believed that all the rejections and/or objections raised by the examiner have been addressed.

All of the dependent claims are patentable for at least the reasons for which the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

Applicant encloses a Petition for Two Month Extension of Time. Please apply the required fee of \$450, and any other charges, to deposit account 06-1050, referencing attorney docket 10559-619001.

Respectfully submitted,

Date: Sept. 12, 2002

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